REMARKS

Claims 1-23, 27-32 and 38-45 are pending. The amendments are fully supported by the original disclosure and, thus, no new matter is added by their entry. The scope of the mutations required by the claims is clarified. The reference to mutation of a catalytic nucleophilic residue of the active site is deleted.

35 U.S.C. 112 – Definiteness

Claims 1-4, 16-17, 19-21 and 38 were rejected under Section 112, second paragraph, as allegedly "indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention." Applicant traverses.

Claim 1(a) is amended as suggested by the Examiner to refer to "SEQ ID NO:2 mutated at an amino acid residue or residues selected from the group consisting of W433, E432 and M439 and combinations thereof" (see also similar amendments made in parts (b) and (c), and throughout the remaining claims, for consistency). It is believed that these amendments clarify the scope of mutations encompassed by the claims.

Claim 1 is further amended to delete reference to mutation of a catalytic nucleophilic residue of the active site. Claim 1 is directed to modified polypeptides having β-glycosidase activity and the function of the claimed polypeptides is believed to be clear.

Applicant requests withdrawal of the indefiniteness rejection.

35 U.S.C. 112 – Written Description

The specification must convey with reasonable clarity to persons skilled in the art that applicant was in possession of the claimed invention as of the filing date sought. See *Vas-Cath v. Mahurkar*, 19 USPQ2d 1111, 1117 (Fed. Cir. 1991). But the Patent Office has the initial burden of presenting evidence or a reason why persons of ordinary skill in the art would not have recognized such a description of the claimed invention in the original disclosure. See *In re Gosteli*, 10 USPQ2d 1614, 1618 (Fed. Cir. 1989).

Claims 1-17, 19-21, 23 and 38-42 were rejected under Section 112, first paragraph, as allegedly failing to comply with the written description requirement. Applicant

traverses because the specification teaches a representative number of species within the claimed genus.

It is understood that the Examiner's rejection was based on the previous claim 1 and, in particular, the alleged lack of clarity as to the number of possible mutations in SEQ ID NO:2 that were within the scope of the claim. As explained above, parts (a) and (b) of claim 1 are not directed to SEQ ID NO:2 including any number of mutations. They are directed to specific mutations at amino acid residues W433, E432, M439, or any combination of those three residues (or residues corresponding to these specific positions in family 1 glycosyl hydrolases). Parts (a) and (b) of claim 1 are presently limited to just the specific mutations that are recited explicitly; claim 1 is further amended to delete the optional mutation of a catalytic nucleophilic residue of the active site. Therefore, it is believed that the scope of claim 1 as now amended is sufficiently described in Applicant's specification. Similar amendments are made in the remaining claims. In view of the amendments now made to the claims, the rejection for lack of written description is believed to be overcome.

Applicant requests withdrawal of the written description rejection.

35 U.S.C. 112 – Enablement

The Patent Office has the initial burden to question the enablement provided for the claimed invention. M.P.E.P. § 2164.04, and the cases cited therein. It is incumbent upon the Patent Office, whenever a rejection on this basis is made, to explain why it doubts the truth or accuracy of any statement in a supporting disclosure and to back up assertions of its own with acceptable evidence or reasoning which is inconsistent with the contested statement. *In re Marzocchi*, 169 USPQ 367, 370 (C.C.P.A. 1971).

Claims 1-17, 19-21, 23 and 38-42 were rejected under Section 112, first paragraph, as allegedly failing to comply with the enablement requirement. Applicant traverses because the specification enables the skilled artisan to practice the claimed invention without undue experimentation.

The Examiner also rejected the claims as lacking enablement in view of the number of possible mutations at any positions of SEQ ID NO:2 and the reference to a

catalytic nucleophilic residue. Again, in view of the amendments to parts (a) and (b) of claim 1 and deletion of the optional mutation of a catalytic nucleophilic residue, this rejection is believed to be overcome. In particular, the Examiner suggested that the scope of the invention is too broad in the context of (1) any mutation at any positions of SEQ ID NO:2 and (2) any mutation at any position of a family 1 glycosyl hydrolase enzyme. Claim 1 parts (a) and (b) are now amended to specify that mutations may only be present at one, two or three of the specified amino acid residues. It is believed that Applicant has provided sufficient guidance to enable one of ordinary skill in the art to make and use the invention as set out in claim 1 as now amended without any undue burden. Claim 1 specifies the particular amino acid residues that may be modified without affecting β-glycosidase activity and the number of mutants encompassed within the scope of the claims is so limited. Similar amendments are made in the remaining claims. In view of the amendments now made to the claims, the rejection for lack of enablement is believed to be overcome.

Applicant requests withdrawal of the enablement rejection.

Conclusion

Having fully responded to the pending Office Action, Applicant submits that the claims are in condition for allowance and earnestly solicit an early Notice to that effect. The Examiner is invited to contact the undersigned if additional information is required.

Respectfully submitted,

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